	Application No.	Applicant(s)
Notice of Allowability	10/700,908	RASPL, STEFAN
	Examiner	Art Unit	
	SUSAN Y. CHEN	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to <u>amendment filed on 12/19/08</u>.

2. ☒ The allowed claim(s) is/are <u>1,4,5,7-10 and 14</u>.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

        a) ☐ All   b) ☐ Some*   c) ☐ None of the:

              1. ☐ Certified copies of the priority documents have been received.

              2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

              3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the
                  International Bureau (PCT Rule 17.2(a)).

      * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF
    INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
        Paper No./Mail Date _____ .

    **Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of
    each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the
    attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08),
    Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit
    of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☒ Interview Summary (PTO-413),
    Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

	/Susan Chen/
	Partial Sig. Examiner
	AU: 2161

Response to Amendment

This office action is in response to the amendment filed on Dec. 19, 2008.

Claims 1, 4-5, 7-10, and 12-14 were pending for examination. Claims 1, 4 and 5 have been amended.

Terminal Disclaimer

The terminal disclaimers filed on De. 19, 2009 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,829,561 and U.S. Patent No. 6,003,029 has been reviewed and is accepted. The terminal disclaimer has been recorded.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with the attorney on record (Fredrik Mollborn) on March 19, 2009.

AMENDMENT to Claims:

To the Application received on Dec. 19, 2008 please modify the following:

1. (Currently Amended) A <u>computer-</u>processor-implemented method of clustering a set of records, each of the records having attribute values for a set of attributes, the method comprising:

- performing a first pass across the set of records, the first pass including:

for each attribute of the set of attributes, determining a ~~static~~ characteristic value for said each attribute across the set of records, the ~~static~~ characteristic value being one of a mean value and a median value of the attribute values of said attribute across the records;

- performing a second pass across the set of records, the second pass including:

for each attribute value, determining a deviation from the ~~static~~ characteristic value of said each attribute across the set of records; and

for each record in the set of records, sorting the set of attributes based on the absolute values of the deviations of the attribute values from the ~~static~~ characteristic value of said each attribute from largest to smallest, to provide a key, the key comprising an ordered list of the set of attributes and the deviations from the ~~static~~ characteristic value of said each attribute, ~~the key thereby showing which attributes in the set of attributes deviate the most from the static characteristic value~~;

- combining the set of records based on the key into a clustering result that includes a plurality of clusters, <u>wherein a first record of the set of records contains a first key that has a first sub-sequence and a second record of the set of records contains a second key that has a second sub sequence</u>; and

- refining the clustering result by:

identifying a cluster having a smallest number of records;

for each record of the identified cluster, searching <u>for</u> another cluster having records with best matching keys, ~~based on a user-provided criterion~~ <u>by reducing a length of the first sub-sequence and a length of the second sub-sequence of the records, and by using a distance measure between the clusters</u>; and

distributing the cluster with the smallest number of records to the other cluster having records with best matching keys, to reduce the total number of clusters; and

repeating the identifying, searching and distributing steps until a desired number of clusters has been reached.

2. Canceled.

3. Canceled.

4. (Currently Amended) The method of claim 1, wherein determining the deviation comprises calculating a difference between said each attribute value and the ~~static~~ characteristic value of said each attribute.

5. (Currently Amended) The method of claim 1, wherein determining the deviation comprises calculating a difference between said each attribute value and the ~~static~~ characteristic value of the corresponding attribute, and dividing the difference by the ~~static~~ characteristic value of said each attribute.

6. Canceled.

7. (Currently Amended) The method of claim 1, ~~wherein a first record of the set of records contains a first key and a second record of the set of records contains a second key; and~~ further comprising placing the first key and the second key into a single cluster if the first key and the second key have identical subsequences of a first length.

8. (Currently Amended) The method of claim 1, ~~wherein a first record of the set of records contains a first key and a second record of the set of records contains a second key; and~~ further comprising placing the first key and the second key into a single cluster if the first key and the second key have identical subsequences of absolute values of the deviations.

9. (Currently Amended) The method of claim 1, ~~wherein a first record of the set of~~ ~~records contains a first key that has a first sub-sequence, and a second record~~ ~~has a second sub-sequence contains a second key; and~~ further comprising placing the first key and the second key into a single cluster if the first and second sub-sequences comprise the same set of attributes.

10. (Currently Amended) The method of claim ~~9~~1, wherein the first and second subsequences comprise the same set of attributes irrespective of a sign of the deviations of the attribute values.

11-13. Canceled.

14. (Currently Amended) The method of claim ~~13~~1, wherein the distance measure comprises a Euclidean distance.

15-26. Canceled.

Allowable Subject Matter

Claims 1, 4-5, 7-10 and 14 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 1 is allowable because the prior art on record or that encountered in searching for the invention, fails to disclose or suggest the features of instant invention – a cluster-results refining method for a set of records having mean and medium attribute characteristic values determined from a first pass of clustering processing and sorted absolute key values derived from the characteristic values of each attributes in a second pass of clustering processing, for combining the set of records based on the keys in the sorted list into the clustering results that includes a plurality of clusters, thereby, to repetitively identify a cluster having a smallest number of records with best matching keys and measuring the distance of these clusters for reducing the total number of clusters until a desired number of clusters has been reached in a combination with all the limitations as recited by applicant.

Claims 4-5, 7-10 and 14 depend on claim 1, hence, are allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUSAN Y. CHEN whose telephone number is (571)272-4016. The examiner can normally be reached on Monday - Friday from 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mofiz Apu can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Susan Y Chen/
Partial Sig. Examiner
Art Unit 2161

March 25, 2009

/Apu M Mofiz/
Supervisory Patent Examiner, Art Unit 2161